

CI Concepts & Tools



	What is it?	How does it work?
5S	<p>A method to organize work areas.</p> <ol style="list-style-type: none"> 1. Sort (remove what is not needed) 2. Set in Order (organize needed items) 3. Shine (clean work area) 4. Standardize (write standards for above steps) 5. Sustain (regularly apply the standards) 	<p>Provides a method for eliminating waste that results from a poorly organized work area (e.g., wasting time looking for information/documents).</p>
8 Wastes	<p>Descriptions of non-value added components in our work processes. Wastes include: Defects, Overproduction, Waiting, Non-utilized staff talent, Transportation, Inventory, Motion, and Extra processing.</p>	<p>Once you understand the 8 wastes, you are better able to see them in your processes and take actions to remove them.</p>
A3	<p>A one-page document used to understand and solve a problem or plan and communicate an improvement project. An A3 incorporates PDSA and refers to the paper size (11"x17").</p>	<p>An A3 is a simple tool for planning, communicating, and ensuring your project follows the PDSA methodology.</p>
Batching	<p>Batching is when we wait for a certain amount of items (i.e., batch) or time before performing the next step in the process. In most instances, batching increases wait time for customers, because it holds up work that is ready to move to the next process step.</p>	<p>Batching is effective when there is a high switching cost or set up time between process steps so you "batch" to reduce unit costs. , such as time needed to access a data system,</p>
Kaizen	<p>Kaizen is a Japanese word that translates to "continuous improvement." It most often refers to an event during which employees rapidly improve a process using CI tools. Kaizen emphasizes the empowerment of all employees to suggest and implement process improvements.</p>	<p>Kaizen events are typically led by a neutral facilitator over the course of one to five days. The facilitator leads a team in:</p> <ol style="list-style-type: none"> 1. Mapping an existing process 2. Identifying the waste in the process 3. Brainstorming improvements 4. Mapping out a new, improved process 5. Developing an action plan to implement the new process
Lean	<p>A method, set of tools, and mindset for improving work areas and processes by eliminating waste. Lean strives to create the <i>Ideal Process</i>. The Ideal process is:</p> <ul style="list-style-type: none"> • Completed by one person • Completed one at a time (no batching) • Completed as soon as the request is made • Completed without interruption (continuous flow) • Completed with the information provided • Completed correctly the first time – no errors or defects 	<ol style="list-style-type: none"> 1. Specifies value from the customer standpoint. 2. Eliminates process steps that do not add value. 3. Achieves tight sequence between process steps so the product or service flows smoothly toward the customer (one-piece flow). 4. Allows customers to pull value from the process versus having the process pushed to them (e.g., customer can order their license online versus having to come to a physical location with limited service hours). 5. Follows PDSA until the <i>Ideal</i> (no-waste) process is created.

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PDSA	The Lean methodology (Deming Cycle): <ul style="list-style-type: none"> Plan (establish plan and expected results) Do (implement plan) Study/Check (verify results achieved) Act (review and assess; do it again) 	Applies a scientific approach to making improvements. The iterative process ensures learning is captured and improvements are continuous.
Poka-Yoke	Design error detection and prevention into production processes with the goal of achieving zero defects.	Eliminates errors through design, which saves resources in looking for and fixing errors later in the process.
Process Mapping	A technique to document the sequence and flow of steps in a process.	Helps you see how current work is done, and allows you to identify wastes and value added process steps.
Process Measures	Metrics that tell you how well you are doing and if operations are functioning properly.	Process measures make it possible to set goals, evaluate if strategies are achieving desired results, and communicate results.
Root Cause Analysis	A problem solving approach that resolves the underlying causes of a problem, instead of applying quick fixes to visible symptoms. Some typical root cause analysis tools are 5 Whys, fishbone diagram, and affinity and relations diagrams.	Helps to ensure that a problem is eliminated by applying solutions or corrective measures to the “root cause” of the problem. A common approach is to ask why five times – each time moving a step closer to discovering the true underlying problem.
SIPOC Diagram	A tool used to identify high-level, relevant elements of a process improvement project. SIPOC is an acronym for: Suppliers, Inputs, Process, Outputs, and Customers.	It is a valuable tool for scoping a Kaizen event or problem solving project.
Six Sigma	An approach for reducing process errors and variation using improvement experts, a structured method, performance measures, and tools. Six Sigma refers to a goal of 3.4 defects per million units produced.	Six Sigma is a great approach for complex improvement projects. Six Sigma follows the DMAIC method: D efine, M easure, A nalyze, I mprove, and C ontrol.
Standard Work	Documented procedures that capture <i>current</i> best practices (including the sequence and time to complete each task). Standardized work is living documentation of how the work should be done (it continually evolves through Kaizen).	Standardized work helps maintain service quality, provides a baseline for future improvement activities, and allows easier onboarding of staff.
Visual Management	Visual signals to communicate information needed to make business decisions. This mapping can identify wastes or areas requiring further analysis.	Visual management makes the state and condition of processes easily accessible and clear to everyone. The meters and gauges on a car dashboard are a common example.
Voice of the Customer	The needs, expectations, and service preferences of customers.	Helps in the design and delivery of products/services and assessing performance.
WorkOut	A method for managers and teams to identify and prioritize opportunities for improvement. A WorkOut is typically completed in a half-day session led by a neutral facilitator.	During a WorkOut the team: <ol style="list-style-type: none"> 1. Defines processes for delivering services 2. Identifies process challenges and barriers 3. Brainstorms solutions 4. Sorts and prioritizes solutions